



Abstract

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PI Title:

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DEPENDENCE

Abstract: Adolescent smoking prevalence has continued to climb with 1997 estimates being the highest reported since 1979. The relationship between adolescent smoking and subsequent nicotine dependence in adulthood has been well established. While biological effects of smoking have been studied in adults, the biobehavioral aspects have not been examined in adolescents. In addition gender differences in smoking that have been reported for adolescents address sociobehavioral factors with limited emphasis on biological data which is essential for understanding adolescent nicotine dependence. The need to identify biomarkers of adolescent nicotine dependence is essential to the health of adolescent smokers. The first aim of this one-factor factorial design study is to characterize the biomarkers of smoke constituent exposure and smoking topography parameters in adolescent smokers. Smoke constituent exposure includes carbon monoxide and plasma nicotine increases post-cigarette and baseline cotinine levels. Smoking topography parameters include puff volume and duration, interpuff interval, and inhalation and exhalation duration. In the second aim smoking topography parameters, smoke constituent exposure, and level of nicotine dependence will be compared between adolescent male and female smokers. The third aim will compare smoke constituent exposure, smoking topography parameters and level of nicotine dependence of prepubescent and later teens. The final aim will contrast biological markers of smoke constituent exposure with accepted behavioral measures of nicotine dependence. Characterizing biological and behavioral aspects of smoking in adolescent boys and girls will provide a foundation to address the gap in this important research area. The proposed study represents the first phase of a program of research that includes analyzing

differences in smoking behavior of adolescents from multiple ethnic groups, as well as increasing the scientific basis from which to design tailored smoking prevention and cessation interventions by gender and age group.

Thesaurus Terms:

adolescence (12-18), drug addiction, nicotine, smoking, substance abuse related behavior biomarker, gender difference

behavioral /social science research tag, clinical research, human subject

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